

those reports. I have also reviewed the declarations of Drs. Engel, Wells, Stevenson, Olsen, and Fisher that accompanied Plaintiffs' October 1, 2008 response to Defendants' motion.

5. The continued changes to these expert reports have hampered and continue to greatly hamper my work in evaluating and responding to Plaintiffs' expert reports.

The Declarations

6. The main argument presented by the declarations of Drs. Engel, Wells, Stevenson, Olsen, and Fisher is that all of the hundreds of changes in their various errata affect only small sections of their reports and do not change their ultimate opinions and conclusions. As a result, the declarations suggest, I and the other defense experts responding to those altered reports should not be concerned about the changes and need little additional time to address them. This suggestion is mistaken for at least three reasons.

7. First, I cannot simply take the word of Plaintiffs' experts concerning what has and has not changed in their reports and supporting materials. The materials that Plaintiffs' experts originally provided earlier this summer as the supporting materials for their expert reports were fragmented and incomplete, as Plaintiffs' expert eventually conceded after a number of weeks of discussion. In addition, the stated reason for many of the changes in Plaintiffs' expert reports is Dr. Engel use of "erroneous data" in his report, and the resulting flawed Engel report created a ripple effect on other expert's reports. Under these circumstances, I cannot merely trust that Plaintiffs' experts have now fully identified and accurately characterized all of the locations in their reports where conclusions could or should be altered based on the identified changes. It is my professional and ethical obligation to examine all of the Plaintiffs' experts' data and analysis again to determine what has actually changed.

8. Second, although Plaintiffs' experts conclude that none of the recent changes

affect other sections of their reports or opinions, I cannot assume that those conclusions are correct. Based on my review of Plaintiffs' expert original reports, I believe that it is quite possible that the recent alterations reflected in the errata may affect other scientific aspects of this case in ways that Plaintiffs' expert have not recognized or accounted for. In any event, I cannot responsibly respond to a Plaintiffs' expert report based on altered data without reviewing the effect of the altered data on the entire report.

9. Third, many of the alterations in Plaintiffs' experts' supporting data are substantial, including some that change figures by orders of magnitude. The claim by Plaintiffs' experts that such substantial changes in their data have no effect whatever on their ultimate opinions and conclusions is troubling and difficult to accept, and requires that I carefully reexamine all of the Plaintiffs' experts' supporting data and analysis, not just the data that were changed.

10. In addition, in contrast to the impression offered by Plaintiffs' experts, many of the subjects of Plaintiffs' errata are critical to the evaluation of Plaintiffs' scientific case. For example, Dr. Wells' errata both adds data and alters the ratio he uses in offering chlorophyll *a* as surrogate for algal growth (Wells. Decl. ¶¶ 7(1), 10; Dkt. No. 1766-3). This chlorophyll *a*/algae connection is a critical link in the Plaintiffs' experts' chain of reasoning, and its alteration and amendment requires reexamination of the entire chain. Similarly, Dr. Fisher's changes in his values for the composition and component ratios of human waste, cattle manure, and poultry manure (Fisher Decl. ¶¶ 6, 8; Dkt. No. 1766-6) implicate a key element of Plaintiffs' scientific theory, and will require full reexamination.

The New September 30 Errata

Dr. Scott Wells

11. I am informed that the State provided the newest errata for Dr. Wells to defense counsel on September 30, 2008, although the errata itself is dated September 22. This newest 122-page errata includes numerous changes to the input and output of Dr. Wells' hydrodynamic and water quality model of Tenkiller reservoir, including modifications to boundary conditions, calibration values, error analyses, and results. Based on these changes, Dr. Wells also provides numerous revised figures and revised tables. The second errata does not distinguish between the new (September 30) changes and the old (August 26) changes.

12. Although I have not yet had the opportunity to fully examine these new data and conclusions, they call into serious question Dr. Wells' statement that his errata provide "no new opinions" and do "not alter any of the conclusions or opinions" in his original report. (Wells. Decl. ¶¶ 6, 9; Dkt. No. 1766-3.) On the contrary, the errata appear to substantially alter Dr. Wells' model results such that they may call into question some of Dr. Wells' final conclusions regarding the water quality conditions predicted by his model under a variety of scenarios.

Dr. Berton Fisher

13. Dr. Fisher's latest errata significantly modifies his Total Phosphorus (P), Total Zinc (Zn), Total Copper (Cu), and Total Arsenic (As) ratios in conclusion 18 due to his admitted use of "wrong data" for Total P. The ratios for Total Zn/Total P, Total Cu/Total P, Total As/Total P, and Total Zn/Total Cu for poultry waste, cattle waste, and wastewater treatment plant ("WWTP") effluent changed substantially compared to the originally reported values. Because these ratios are so central to Dr. Fisher's conclusions, my first impression is that the changes in the ratios should have necessitated modifications to Dr. Fisher's conclusions

regarding the relative abundance of these compounds in poultry waste, cattle waste, and WWTP effluent and their influence on water quality. As a result, I will need to further examine the extent to which some of Dr. Fisher's conclusions should have been changed.

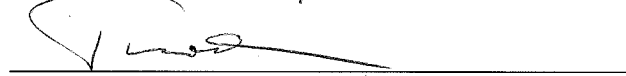
14. Again, all of these changes undermine Dr. Fisher's assertion that his opinions and conclusions remains unchanged. In order to address the impact of these changes on Dr. Fisher's conclusions, much of my work performed regarding Dr. Fisher's original report will now have to be redone.

Effect on Timing of Work

15. I have been asked by counsel to comment on the effect of Plaintiffs' experts' multiple errata on my own schedule for the completion of my work in this case, assuming that the Court permits the already served errata to stand and assuming that Plaintiffs' experts do not offer even more errata. If I were working independent of other defense experts, I estimate that addressing the changes and additional data introduced by the multiple errata offered by Plaintiffs' attorneys would require an additional four weeks past my current deadline. However, as explained in my September 11 Declaration, my work is in part dependent on the completion of Dr. Vic Bierman's work in the case, and I cannot complete my report until after Dr. Bierman's report is complete and I have the opportunity to review it. I estimate that I would need four weeks after I receive Dr. Bierman's report to finish my own report.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on October 4, 2008



Timothy J. Sullivan, PhD